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10/528,347	09/09/2005	Klaus Peter May	DE02 0212 US	4348

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EXAMINER	
GUERRA-ERAZO, EDGAR X	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,347	MAY ET AL.	
	Examiner	Art Unit	
	EDGAR GUERRA-ERAZO	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/17/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. This office action is in response to applicant's submission filed on 09/09/2005. Claims 1-15 are pending in the application and have been examined.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

3. The Information Disclosure Statement filed on 03/17/2005 have been accepted and considered in this office action.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 14 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Although Claim 14 falls within a statutory category (i.e. method), Claim 14 recites the step for identifying said received frame as having a first type associated with a frame indicator pattern that generated said maximum correlation value if said maximum correlation value exceeds said threshold and otherwise identifying said received frame as having a default type, that do not, itself, produce a "useful, concrete, and tangible result," and thus, is not directed to a practical application. In order to be considered statutory, the claimed invention as a whole must be useful and accomplish a practical application. That is, it must produce a "useful, concrete and

tangible result " (State Street, 149 F.3d at *>1373-74, 47 USPQ2d at 1601-02). In the case of Claim 14, no transmitting step is recited which can actively supply the said identified frame type indicator and said coded information. Thus, claim 14 is directed to non-statutory subject matter. Dependent claim 15 further limit rejected independent claim 14, and thus, is also directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-15 rejected under 35 U.S.C. 102(b) as being anticipated by Hellwig et al. (U.S. Patent: 6,658,381). Hereinafter referred to as Hellwig.

With respect **Claim 1**, Hellwig discloses:

A method for transmitting frame type information in a communication system comprising the steps of: providing at least two different coding rates for processing said information in said transmitter *(providing at least two different coding rates for processing information in a transmitter, col. 3, lines 63-64),* wherein said frame type information is associated with said at least two different coding rates *(two different coding rates, col. 3, lines 65-66);* coding, at said transmitter, information at a rate based on a selected one of said at least two different coding

rates *(frames of variable lengths Nr, generated by a variable rate coder 30 are mapped to a channel with a fixed rate, with a resulting frame length M, col. 5, lines 55-59);* including a frame type indicator with said coded information in a frame, said frame type indicator being selected from at least two frame type indicators depending upon said selected one of said at least two different coding rates wherein said at least two frame type indicators have a different bit length *(frame type indicator can be transmitted in each frame to inform the receiver's decoder to switch to an appropriate mode (e.g., rate 1, 1/2, 1/4 and 1/8 in the foregoing example) to properly decode each frame, further each frame type indicator can have a different number of bits, col. 6, lines 40-43, 59-60);* and transmitting said frame including said frame type indicator and said coded information *(frames of variable lengths Nr, generated by a variable bit rate coder 30 (disposed, for example, in a mobile station 12), are mapped to a channel with a fixed rate, with a resulting frame length M, further the coding rate r is determined by a control unit 32 and forwarded to the coder 30 which outputs speech frames consisting of Nr coded bits per frame, furthermore these coded bits are then further processed and transmitted, col. 5, lines 55-63).*

With respect **Claim 2**, Hellwig further discloses:

wherein a bit length of a frame type indicator associated with a lower coding rate is greater than a bit length of a frame type indicator associated with a higher coding rate *(number of bits depends on the coding rate r, e.g., L_1 =90 bits (for r=1), L_{12} =50 bits (for r=1/2), L_{14} =45 bits (for r=1/4) and L_{18} =20 bits, further, if the number of bits in the frame indicator pattern is set to Fr =90-Lr, the variable bit rate source decoder can determine the coding rate, and therefore begin decoding, after 90 bits regardless of the coding rate employed for a particular frame, col. 8, lines 1-9).*

With respect **Claim 3**, Hellwig further discloses:

wherein said coding is speech coding *(using different source (e.g., speech) coding modes, col. 5, lines 46-47).*

With respect **Claim 4**, Hellwig further discloses:

wherein one of said at least two coding rates are rate one and rate ½ *(coding rate r=1, coding rate r=1/2, col. 6, lines 13-14)*

With respect **Claim 5**, Hellwig further discloses:

wherein said frame type indicator associated with rate one has a bit length of zero and said frame type indicator associated with rate 1/2 has a bit length of 40 *(coding rate r=1, the first 90 bits contain only payload data and no frame type indicator. For coding rate r=1/2, the first 90 bits include a frame type indicator of 40 bits followed by 50 bits of payload information, Col. 8, lines 13-17).*

With respect **Claim 6**, Hellwig further discloses:

A method for determining a frame type of a received frame of information comprising the steps of: receiving said frame *(performing a pattern matching process to determine the rate of a received frame, col. 7, lines 1-2);* correlating said received frame with a first frame indicator pattern *(determining a correlation level between the received frame and the first frame indicator, col. 7, lines 9-11);* identifying said received frame as having a first type associated with said first frame indicator pattern if a result of said correlation exceeds a threshold *(identifying a received frame by retrieving each of three known, frame type indicators from memory and searching the received frame to determine if a match exists, further retrieving a first frame indicator pattern of,*

for example, 142 bits that is associated with 1/2 rate frames and determine a correlation level between the received frame and the first frame indicator, col. 7, lines 5-12); correlating, if said received frame is not identified as having said first type, said received frame with a second frame indicator pattern *(If the level of correlation is high enough, then the receiver will identify that frame as a rate 1/2 frame. Otherwise, the process will continue to retrieve a second frame indicator pattern of, for example, 221 bits and perform a second correlation, col. 7, lines 10-14)*; identifying said received frame as having a second type associated with said second frame indicator pattern if a result of said correlation exceeds a threshold, wherein said first and second frame indicator patterns have different bit lengths *(retrieving a second frame indicator pattern 221 bits and perform a second correlation where the retrieving of a first time indicator pattern was 142 bits, further if the maximum correlation value exceeds the threshold, then the frame is identified as having a coding rate associated with the frame indicator that generated the maximum correlation value, col. 7, lines 7-13, 25-28);* and otherwise, identifying said received frame as having a third type *(the received frame can be correlated with all of the frame indicator patterns, further the maximum correlation value can be compared with a threshold value. If the maximum correlation value is below the threshold, then the receiver identifies the frame with a default (e.g., maximum) coding rate. Otherwise, if the maximum correlation value exceeds the threshold, then the frame is identified as having a coding rate associated with the frame indicator pattern that generated the maximum correlation value, col. 7, lines 20-29).*

With respect **Claim 7**, Hellwig further discloses:

wherein said first, second and third types are different speech coding rates *(four different coding rates which may be employed for information transmission, appropriate mode (e.g., Rate 1, ½, ¼ and 1/8), col. 6, lines 9-10, 42-43).*

With respect **Claim 8**, Hellwig further discloses:

A receiver comprising: receive processing circuitry for receiving a frame of information *(hierarchical level, each of the BSCs 16 controls a group of base transceiver stations (BTSs) 20. Each BTS 20 includes a number of tranceivers TRXs (not shown) that use the uplink and downlink RF channels to serve a particular common geographical area, such as one or more communications cells 21. The BTSs 20 primarily provide the RF links for the transmission and reception of data burst to and from the mobile stations 12 within their designated cell, Col. 5, lines 23-31);* a memory for storing a plurality of frame indicator patterns , including a different frame indicator pattern for each of a plurality of different coding rates, at least two of said different frame indicator patterns having a different bit length *(four different coding rates, the receiver can attempt to identify a received frame by retrieving each of three known, frame type indicators from memory and searching the received frame to determine if a match exists, further the number of bits depends on the coding rate r, e.g., L_1 =90 bits (for r=1), L_{12} =50 bits (for r=1/2), L_{14} =45 bits (for r=1/4) and L_{18} =20 bits col. 7, lines 3-6, col. 8, lines 1-3);* and a processor for correlating said frame of information with each of said plurality of stored frame indicator patterns until a match is found to identify a coding rate associated with said frame of information *(performing a pattern matching process to determine the rate of a received frame, further the receiver can retrieve a first frame indicator pattern of, for example, 142 bits that is associated with 1/2 rate frames and determine a correlation level between the received frame*

and the first frame indicator. If the level of correlation is high enough, then the receiver will identify that frame as a rate 1/2 frame. Otherwise, the process will continue to retrieve a second frame indicator pattern of, for example, 221 bits and perform a second correlation. If no match is found, then the receiver will proceed to retrieve the third frame indicator pattern of, for example, 255 bits and perform a third correlation, col. 7, lines 1-2, 9-19).

With respect **Claim 9**, Hellwig further discloses:

wherein each of said plurality of stored frame indicator patterns has a different length *(first frame indicator 142 bits associated with ½ rate frames (first indicator), 221 bits (second indicator), 255 (third indicator) bits, col. 7, lines 9-19).*

With respect **Claim 10**, Hellwig further discloses:

wherein a bit length of one of said at least two frame type indicators associated with a lower coding rate is greater than a bit length of another of said at least two frame type indicator associated with a higher coding rate *(For coding rate r=1, the first 90 bits contain only payload data and no frame type indicator. For coding rate r=1/2, the first 90 bits include a frame type indicator of 40 bits followed by 50 bits of payload information. For coding rate=1/4, the first 90 bits of the frame include a 45 bit frame type indicator followed by 45 bits of payload information. Finally, for a frame of rate=1/8, the first 70 bits comprise the frame type indicator followed by 20 bits of payload information. Of course those skilled in the art will appreciate that the numbers provided in this example are merely illustrative and that different number of bits could be provided for the frame type indicators depending upon the varying coding rates, etc, col.8, lines 10-25).*

With respect **Claim 11**, Hellwig further discloses:

wherein said coding is speech coding *(using different source (e.g., speech) coding modes, col. 5, lines 46-47).*

With respect **Claim 12**, Hellwig further discloses:

wherein one of said at least two coding rates are rate one and rate ½ *(coding rate r=1, coding rate r=1/2, col. 6, lines 13-14).*

With respect **Claim 13**, Hellwig further discloses:

wherein said frame type indicator associated with rate one has a bit length of zero and said frame type indicator associated with rate 1/2 has a bit length of 40 *(coding rate r=1, the first 90 bits contain only payload data and no frame type indicator. For coding rate r=1/2, the first 90 bits include a frame type indicator of 40 bits followed by 50 bits of payload information, Col. 8, lines 13-17).*

With respect **Claim 14**, Hellwig further discloses:

A method for determining a frame type of a received frame of information comprising the steps of: receiving said frame *(performing a pattern matching process to determine the rate of a received frame, col. 7, lines 1-2);* correlating said received frame with a plurality of frame indicator patterns *(correlating the received frame with all of the frame type indicator patterns, associated with rates ½, ¼, 1/8, col. 7, lines 9-22);* comparing a maximum correlation value, generated by said correlating step, with a threshold *(the maximum correlation value can be compared with a threshold value, col. 7, lines 21-22);* identifying said received frame as having a first type associated with a frame indicator pattern that generated said maximum correlation

value if said maximum correlation value exceeds said threshold *(performing a pattern matching process to determine the rate of a received frame, further the receiver can retrieve a first frame indicator pattern of, for example, 142 bits that is associated with 1/2 rate frames and determine a correlation level between the received frame and the first frame indicator. If the level of correlation is high enough, then the receiver will identify that frame as a rate 1/2 frame. Otherwise, the process will continue to retrieve a second frame indicator pattern of, for example, 221 bits and perform a second correlation. If no match is found, then the receiver will proceed to retrieve the third frame indicator pattern of, for example, 255 bits and perform a third correlation, col. 7, lines 1-2, 9-19);* and otherwise identifying said received frame as having a default type *(if the maximum correlation value is below the threshold, then the receiver identifies the frame with a default (e.g., maximum) coding rate, col. 7, lines 22-25).*

With respect **Claim 15**, Hellwig further discloses:

wherein said first and default types are different speech coding rates *(four different coding rates which may be employed for information transmission, appropriate mode (e.g., Rate 1, ½, ¼ and 1/8), col. 6, lines 9-10, 42-43).*

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Pearce et al. (US 6732072) discloses a Processing received data in a distributed speech recognition process.

Bi et al. (US 6970439) discloses a Method and apparatus for increasing orthogonal code space in a CDMA RAN.

Bruhn (US 6452941) discloses a Method and system for alternating transmission of codec mode information.

Wright (US 6445702) discloses a Common downlink frame for differing coding rates.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgar Guerra-Erazo whose telephone number is (571) 270-3708. The examiner can normally be reached on M-F 7:30a.m.-5:00p.m. EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edgar Guerra-Erazo/
Examiner, Art Unit 2626

/Patrick N. Edouard/
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